

Appl. No. 10/038,756
March 1, 2004
Reply to Office Action of November 28, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A carbohydrate foam comprising:

- (a) a matrix comprising a regenerated carbohydrate material produced from an aqueous carbohydrate composition comprising a water-insoluble carbohydrate, wherein the carbohydrate is at least partially dissolved in an aqueous zinc chloride solution capable of at least partially dissolving the carbohydrate; and
- (b) a plurality of pores dispersed within the matrix, wherein the pores are produced by introduction of a gas into the aqueous carbohydrate composition prior to regeneration.

Claim 2 (original): The carbohydrate foam of claim 1, wherein the carbohydrate is selected from cellulose or chitin.

Claim 3 (original): The carbohydrate foam of claim 1, wherein the carbohydrate comprises cellulose and the cellulose is selected from mixed office waste or fluffed pulp.

Claim 4 (original): The carbohydrate foam of claim 1, wherein a plurality of the pores are open-celled.

Claim 5 (original): An absorbent product comprising a porous absorbent material wherein the porous absorbent material comprises the carbohydrate foam of claim 1.

Claim 6 (previously presented): The absorbent product of claim 5, wherein the product is selected from diapers, sanitary napkins, sponges, bandages, facial tissue, or paper towels.

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Claim 7 (original): The carbohydrate foam of claim 1, wherein the foam is in the form of a sheet.

Claim 8 (original): The carbohydrate foam sheet of claim 7, wherein the pores on the surface of the sheet are substantially closed-celled and the pores on the interior of the sheet are substantially open-celled.

Claim 9 (original): A facial tissue comprising the carbohydrate foam sheet of claim 7.

Claim 10 (original): A paper towel comprising the carbohydrate foam sheet of claim 7.

Claim 11 (canceled)

Claim 12 (currently amended): The carbohydrate foam of claim 11, wherein the aqueous zinc chloride solution is from about 60% to about 75% ZnCl₂ in water.

Claim 13 (currently amended): The carbohydrate foam of claim 11, wherein the aqueous zinc chloride solution is from about 65% to about 70% ZnCl₂ in water.

Claim 14 (original): The carbohydrate foam of claim 1, wherein the aqueous carbohydrate solution further comprises a salt.

Claim 15 (original): The carbohydrate foam of claim 14, wherein the salt is CaCl₂.

Claim 16 (original): The carbohydrate foam of claim 1, wherein the aqueous carbohydrate solution further comprises a surfactant.

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Claim 17 (original): The carbohydrate foam of claim 1, wherein the gas is selected from air, carbon dioxide, nitrogen, helium or argon.

Claim 18 (original): The carbohydrate foam of claim 1, wherein a blowing agent is used to introduce gas with the aqueous carbohydrate solution.

Claim 19 (original): The carbohydrate foam of claim 18, wherein the blowing agent is selected from the group consisting of carbon dioxide, nitrogen or ammonium chloride.

Claim 20 (original): The carbohydrate foam of claim 1, wherein said foam is regenerated with a regenerating agent.

Claim 21 (original): The carbohydrate foam of claim 20, wherein the regenerating agent is water.

Claim 22 (currently amended): The carbohydrate foam of claim 20, wherein the aqueous solution comprises an aqueous solution of zinc chloride, and wherein excess zinc chloride is removed prior to regeneration.

Claim 23 (original): The carbohydrate foam of claim 22, wherein the removal of excess zinc chloride comprises contacting the foam with an organic solvent.

Claim 24 (original): The carbohydrate foam of claim 23, wherein the organic solvent is selected from ethanol, methanol, or isopropanol.

Claim 25 (original): The carbohydrate foam of claim 1, wherein the aqueous solution comprises at least two carbohydrates.

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Claim 26 (original): The carbohydrate foam of claim 25, wherein the carbohydrates comprise cellulose and chitin.

Claim 27 (original): A personal care product comprising the carbohydrate foam of claim 1.

Claim 28 (original): The personal care product of claim 27, wherein the personal care product is a diaper.

Claim 29 (original): The personal care product of claim 27, wherein the personal care product is a feminine care article.